



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,889	11/04/2003	Ole Troan	10-005	3511
23164 7590 02/26/2009 LEON R TURKEVICH 2000 M STREET NW 7TH FLOOR WASHINGTON, DC 200363307				
EXAMINER SIKRI, ANISH				
ART UNIT 2443		PAPER NUMBER		
MAIL DATE 02/26/2009		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/699,889

**Applicant(s)**

TROAN ET AL.

**Examiner**

ANISH SIKRI

**Art Unit**

2443

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 and 29-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 29-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Claims 22-28 are cancelled.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 7-11, 14-18, 21, 29-32, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanan (US Pub 2004/0078485), in view of Abir (US Pub 2003/0126252).

Consider Claim 15, Narayanan discloses a computer readable storage medium having stored sequences of instructions for routing packets by an Internet Protocol (IP) based router (Narayanan, [0017], [0029], Narayanan discloses that the instructions are stored in a network router), the sequences of instructions including instructions for: executing by the router, a declaration command stored in a configuration file stored in the router (Narayanan, [0028], Narayanan disclosed the use of a ingress filter table, which does contain information related to network prefixes) and that specifies an address prefix identifier and at least one of an address prefix value associated with the address prefix identifier or a source for the address prefix value (Narayanan, [0028]-[0029], Narayanan disclosed that the router updates the information regarding the network prefixes, and source addresses of hosts etc, and updates the ingress filter table file which act as an configuration file), the executing of the declaration command further including storing in the router the address prefix value into a prescribed storage location (Narayanan, [0031], Narayanan discloses the executing of commands which involve add/modify/deletion etc of address prefixes) that is assigned to the address prefix identifier (Narayanan, [0028]); parsing, by the router, a router command stored within

the configuration file of the router and that specifies the address prefix identifier (Narayanan, [0028]-[0029]); retrieving by the router the address prefix value for the address prefix identifier from the prescribed storage location assigned to the address prefix identifier (Narayanan, [0033], Narayanan disclosed on how the prefixes are retrieved from the ingress filter tables); and executing the router command within the router based on applying the address prefix value retrieved from the prescribed storage location as the operand in the router command (Narayanan, [0033], Narayanan discloses if the packet is legitimate, the signaling occurs from the route processor to the ingress filter instructing the ingress filter to be updated to include the unknown source address. Narayanan does indicate on how the address prefix value acts as an operand for the router to execute instructions). Narayanan discloses on how an IP router parses its configuration files which contain address prefix values, and the configuration files are stored in the memory of the router (Narayanan, [0028], Narayanan discloses on how the ingress filter table files are used as configuration files).

But Narayanan does not explicitly disclose that the address prefix identifier is a non-numeric representation of an address prefix.

Nonetheless, Abir discloses the address prefix identifier a non-numeric representation of an address prefix (Abir, [0005]-[0006]). Abir discloses on how address prefix are configured to their non-numeric values.

Both Abir and Narayanan provide features related to management of packets with the aid of routers. Therefore one of ordinary skill in the art would have been motivated to combine the teachings since both are within the same environment.

Therefore, it would have been obvious to a person skilled in the art at the time of the invention to combine the use of logical domain names as non-numeric representation of address prefixes, taught by Abir, in the system of Narayanan, to be incorporated into the router configuration files, which are executed by the router command for network routing purposes.

Consider Claim 16, Narayanan-Abir discloses method of claim 15, wherein the executing of the declaration command further includes (Narayanan, [0033]): sending an address prefix request to a prefix delegation requesting client in the router for retrieval of the address prefix value in response to determining the source specifies prefix delegation (Narayanan, [0028]-[0029]); sending by the prefix delegation requesting client a prefix request according to a prescribed protocol to an authoritative source in response to the address prefix request (Abir, [0005]-[0006], Abir disclosed on how the router communicates with an authoritative source, the DNS in response to prefix request information); and receiving, according to the prescribed protocol, the address prefix value for use by the router via an IP link from the authoritative source (Abir, [0005]-[0006]), the authoritative source authorized to assign the address prefix value to the router (Abir, [0039], Abir discloses on how the address prefix values are obtained from the authoritative source such as DNS and sent to router for updating its memory/tables containing information related to the address prefixes).

Consider Claim 17, Narayanan-Abir discloses the medium of Claim 15, further comprising: sending an address prefix request to a prefix delegation requesting client in the router for retrieval of the address prefix value in response to a determined absence of the address prefix value in the prescribed location (Narayanan, [0028]-[0029], Narayanan disclosed that the router updates the information regarding the network prefixes, and source addresses of hosts etc, and updates the ingress filter table file which act as an configuration file. The contents of the ingress filter can change due to changes as the routing topology are changed); sending by the prefix delegation requesting client a prefix request according to a prescribed protocol to an authoritative source in response to the address prefix request (Abir, [0039], Abir discloses on how the address prefix values are obtained from the authoritative source such as DNS and sent to router for updating its memory/tables containing information related to the address prefixes); receiving, according to the prescribed protocol, the address prefix value via an IP link from the authoritative source (Abir, [0005]-[0006]), the authoritative source authorized to assign the address prefix value to the router; and storing the address prefix value received via the IP link into the prescribed storage location (Abir, [0039], Abir discloses on how the address prefix values are obtained from the authoritative source such as DNS and sent to router for updating its memory/tables containing information related to the address prefixes).

Consider Claim 18, Narayanan-Abir discloses the medium of Claim 15, further comprising instructions for: receiving a new address prefix value to be applied in

executing the address prefix identifier in the router command (Narayanan, [0033], Narayanan discloses if the packet is legitimate, the signaling occurs from the route processor to the ingress filter instructing the ingress filter to be updated to include the unknown source address. Narayanan does indicate on how the address prefix value acts as an operand for the router to execute instructions); and updating the prescribed storage location, associated with the address prefix identifier and that specifies the address prefix value, to also include the new address prefix value (Narayanan [0028]-[0029]); wherein the executing step includes applying at least one of the address prefix value or the new address prefix value as the operand (Narayanan, [0033]).

Consider Claim 21, Narayanan-Abir disclosed the medium of Claim 15, wherein the executing step includes: detecting within the router command an address prefix mask and an address suffix for specifying a router interface (Narayanan, Fig 4, [0032], Narayanan disclosed on how address suffix specifies a router interface); and generating an IP address for the router interface based on applying the address prefix mask to the address prefix value and appending the address suffix (Narayanan, [0032], Narayanan disclosed on how the packets are absorbed in the line card stack, and the link card in turn forwards the packets to the router).

Consider Claim 1, it has similar limitations as Claim 15. Therefore it is rejected under the same rational as Claim 15.



Consider Claim 2, it has similar limitations as Claim 16. Therefore it is rejected under the same rational as Claim 16.

Consider Claim 3, it has similar limitations as Claim 17. Therefore it is rejected under the same rational as Claim 17.

Consider Claim 4, it has similar limitations as Claim 18. Therefore it is rejected under the same rational as Claim 18.

Consider Claim 7, it has similar limitations as Claim 21. Therefore it is rejected under the same rational as Claim 21.

Consider Claim 8, it has similar limitations as Claim 15. Therefore it is rejected under the same rational as Claim 15.

Consider Claim 9, it has similar limitations as Claim 16. Therefore it is rejected under the same rational as Claim 16.

Consider Claim 10, it has similar limitations as Claim 17. Therefore it is rejected under the same rational as Claim 17.

Consider Claim 11, it has similar limitations as Claim 18. Therefore it is rejected under the same rational as Claim 18.

Consider Claim 14, it has similar limitations as Claim 21. Therefore it is rejected under the same rational as Claim 21.

Consider Claim 29, it has similar limitations as Claim 15. Therefore it is rejected under the same rational as Claim 15.

Consider Claim 30, it has similar limitations as Claim 16. Therefore it is rejected under the same rational as Claim 16.

Consider Claim 31, it has similar limitations as Claim 17. Therefore it is rejected under the same rational as Claim 17.

Consider Claim 32, it has similar limitations as Claim 18. Therefore it is rejected under the same rational as Claim 18.

Consider Claim 35, it has similar limitations as Claim 21. Therefore it is rejected under the same rational as Claim 21.

Claims 5, 6, 12, 13, 19, 20, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanan (US Pub 2004/0078485), in view of Abir (US Pub 2003/0126252), and further in view of Schmidt et al (US Pat 7328266)

Consider Claim 19, Narayanan-Abir discloses the medium of Claim 18, wherein the executing step includes executing the router command for each of the address prefix value (Narayanan, [0033], Narayanan discloses if the packet is legitimate, the signaling occurs from the route processor to the ingress filter instructing the ingress filter to be updated to include the unknown source address. Narayanan does indicate on how the address prefix value acts as an operand for the router to execute instructions)

But Narayanan-Abir does not explicitly disclose a specified expiration event associated with the address prefix value.

But Schmidt discloses the specified expiration event associated with the address prefix value. (Schmidt, Col 9 Lines 37-65). Schmidt shows on how new IP addresses are checked within the DHCP table pool of IP address, and the list gets updated as how the IP addresses get expired (Schmidt, Col 9 Lines 37-65).

Both Narayanan-Abir and Schmidt provide features related to management of packets with the aid of routers. Therefore one of ordinary skill in the art would have been motivated to combine the teachings since both are within the same environment.

Therefore it would have been obvious to person skilled in the art at the time of the invention to incorporate the use of detecting expired events related to address prefixes, taught by Schmidt, in the system of Narayanan-Abir for the purpose of updating the configuration files relating to updated prefixes.

Consider Claim 20, Narayanan-Abir-Schmidt disclosed the medium of Claim 19, wherein the executing step includes executing the router command for each of the address prefix value and the new address prefix value (Narayanan, [0033], Narayanan discloses if the packet is legitimate, the signaling occurs from the route processor to the ingress filter instructing the ingress filter to be updated to include the unknown source address. Narayanan does indicate on how the address prefix value acts as an operand for the router to execute instructions), based on the executing step being performed before the specified expiration event (Schmidt, Col 9 Lines 37-65).

Consider Claim 5, it has similar limitations as Claim 19. Therefore it is rejected under the same rational as Claim 19.

Consider Claim 6, it has similar limitations as Claim 20. Therefore it is rejected under the same rational as Claim 20.

Consider Claim 12, it has similar limitations as Claim 19. Therefore it is rejected under the same rational as Claim 19.

Consider Claim 13, it has similar limitations as Claim 20. Therefore it is rejected under the same rational as Claim 20.

Consider Claim 33, it has similar limitations as Claim 19. Therefore it is rejected under the same rational as Claim 19.

Consider Claim 34, it has similar limitations as Claim 20. Therefore it is rejected under the same rational as Claim 20.

***Response to Arguments***

Applicant's arguments with respect to claims 1-21, 29-35 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH SIKRI whose telephone number is 571-270-1783. The examiner can normally be reached on 8am - 5pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia Dollinger can be reached on 571-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anish Sikri  
a.s.

Feb 17, 2009

/Tonia LM Dollinger/  
Supervisory Patent Examiner, Art Unit 2443